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DETACHABLE HOISTING APPARATUS

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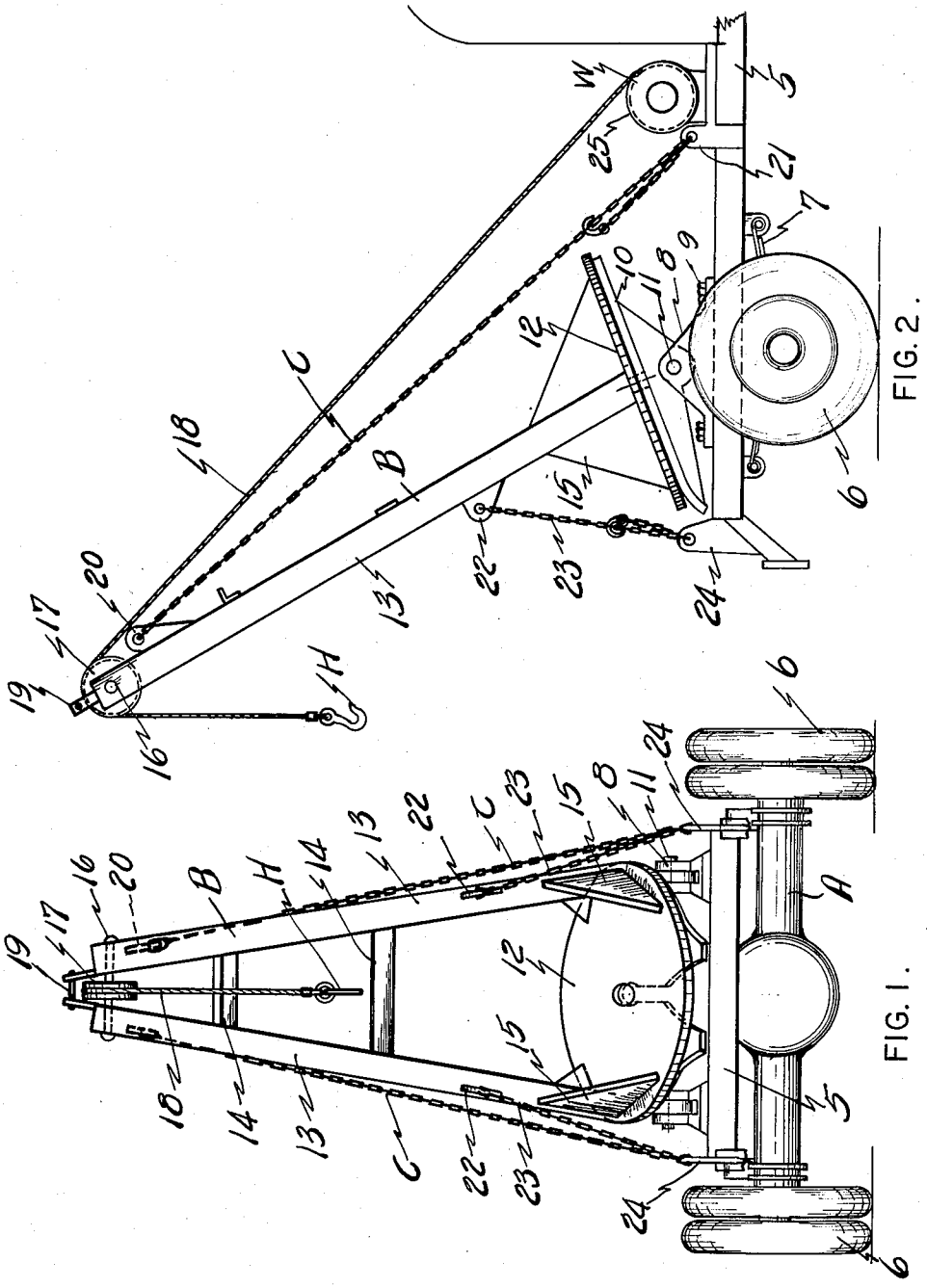


FIG. 2.

FIG. 1.

INVENTOR.

Fred E. Kaunitz Jr.

BY

Frank C. Fearman.

Attorney.

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DETACHABLE HOISTING APPARATUS

Fred E. Kaunitz, Jr., Bay City, Mich.

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3 Claims. (Cl. 212—8)

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This invention relates to hoisting apparatus adapted to be mounted on an automobile truck, and more particularly to an apparatus which can be readily mounted on and/or removed from the truck, so that it may be used for hoisting steel plates, structural beams, or other materials and quickly removed to permit the truck to be used in the conventional manner.

One of the prime objects of the invention is to design a hoisting mechanism including a quickly removable boom structure, which is relatively light in weight, which will hoist and handle heavy loads of all kinds, and which is tiltable to any desired angle of inclination to handle the load required.

Another object is to provide a hoisting mechanism including a boom and associated winch, together with means for guying the boom to rigidly secure it in set position.

A further object is to provide a lightweight, yet strong, substantial structure by means of which relatively heavy loads and/or members can be easily handled with a minimum of time and labor, with the consequent savings incident thereto.

Still a further object is to provide a quickly detachable hoisting apparatus composed of few parts, all of which are of relatively simple design, and which are economical to manufacture and assemble.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts, hereinafter more fully described, illustrated in the accompanying drawing, and more particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportion, and minor details of construction, without departing from the spirit, or sacrificing any of the advantages of the invention.

In the drawing:

Fig. 1 is a fragmentary, side-elevational view showing a conventional motor truck with my improved hoisting apparatus in position thereon.

Fig. 2 is a rear-elevational view thereof.

Referring now more particularly to the drawing in which I have shown the preferred embodiment of my invention. The numeral 5 indicates the frame of a conventional motor vehicle, provided with an axle "A" supported on ground-engaging wheels 6 as usual. Springs 7 are mounted on the axle and connect to the frame, and brackets 8 are mounted on the main frame and are secured in position by means of bolts 9 in the conventional manner.

A fifth wheel 10 is mounted in the bearing

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brackets 8 by means of pins 11, and a plate 12 having upwardly projecting beams 13 is secured to the face thereof, these beams being tied together by means of horizontally disposed braces 14 which form a boom. This boom can be of any desired length, and plates 15 are welded to the boom and to the plate 12 respectively to reinforce the structure.

A transversely disposed pin 16 spans the upper end of the boom "B," and a sheave 17 is journaled thereon and over which a hoist cable 18 is trained, a bridle 19 being provided as shown and provides a guide for said cable.

Brackets 20 are attached to the boom adjacent the upper end thereof, and chains "C" are anchored thereto and to brackets 21 provided on the vehicle frame. Similar brackets 22 are provided on the opposite side of said boom, and chains 23 connect thereto and to the brackets 24 provided on the end of the main frame, these chains holding the boom in set position after the chains have been adjusted.

The winch "W" is of conventional design, and is mounted on the vehicle frame in any desired manner, the cable 18 being wound on the drum 25, thence leading over the sheave 17, with a grab hook "H" on the end thereof for attaching to structural plates, beams, or other materials to be hoisted, spotted, or moved, this winch being drivingly connected to the power take off (not shown) of the vehicle.

The angle of inclination of the boom can be readily changed or adjusted by adjusting the length of the chains "C" and 23, and to remove the boom assembly entirely, it is merely necessary to release the safety catch (not shown) in any standard fifth wheel assembly, unhook the chains, and the boom assembly is then free for removal, so that the truck can then be used for any other purpose.

From the foregoing description, it will be obvious that I have perfected a very simple, practical, and relatively inexpensive hoisting apparatus which can be easily and quickly mounted and/or removed, and by means of which structural materials and articles of all kinds can be hoisted, conveyed and spotted in desired location.

What I claim is:

1. A detachable hoisting apparatus adapted to be detachably mounted on a truck frame, a fifth wheel hingedly connected to said frame, a boom structure including a disc-shaped plate secured to the fifth wheel and tiltable therewith, front brackets on the front of said boom structure adjacent the upper end thereof and on the truck

frame respectively, flexible means anchored to said front brackets and to the truck frame brackets, rear brackets on the rear of the boom structure and on the rear end of the truck respectively, and flexible means connecting said rear boom structure brackets and truck frame rear brackets for holding the boom structure in set position.

2. A hoisting apparatus adapted to be mounted on a truck frame, brackets on said frame, a fifth wheel hingedly and detachably connected to said brackets, a plate fixedly mounted on said fifth wheel, upwardly projecting structural members welded to the face of said plate to form a boom, front brackets secured to the front face of the boom directly adjacent the upper end thereof, and flexible means anchored to said brackets and to the truck frame at a point spaced forwardly of said fifth wheel, rear brackets secured to the rear face of the boom at a point intermediate its length, and flexible means connecting said rear brackets and the truck frame at a point spaced rearwardly of said fifth wheel, a driven winch spaced forwardly of the fifth wheel, a sheave on the boom, and a hoist line trained over said sheave and connected to said winch.

3. A hoisting apparatus adapted to be detachably mounted on a truck frame, brackets on said

frame, a fifth wheel hingedly connected to said brackets, a tiltable boom structure rigidly connected to said fifth wheel and comprising a disc-shaped plate including interconnected, spaced-apart boom members having their lower ends welded to said plate to form a rigid structural unit, front brackets secured to the front face of the boom members at a point adjacent the upper end thereof, rear brackets secured to the rear face of said boom members, and flexible means connected to said front and rear brackets respectively and to the frame in front of and in the rear of said boom for holding it in set position.

FRED E. KAUNITZ, JR.

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